now say that they'll be opting for lower inventories. That's the highest such figure in several years—far outweighing a small 7% who feel that some further modest stocking may be in order.

One the other hand, both mill and service center executives remain basically optimistic, still talking in terms of a 75 million-ton-year.

Distributers don't seem all that concerned either. As SSCI president Andrew G. Sharkey puts it, "What our industry seems to be experiencing at this point is a plateauing effect. Shipping levels are still strong and we are not seeing a significant weakening in demand."

Today's less buoyant demand also seems to be contributing to a price as the trend toward narrower mill discounts level off, but there also seems to be plenty of infighting on the service center level—particularly on sheet in the Midwest.

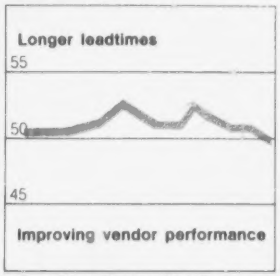
There are also plenty of import bargains around. More to the point: Some 96% of service centers say imported carbon steel is priced under comparable domestic levels with the figure rising to 100% in the case of stainless. More important, 15-20% of the respondents put the price differentials in the relatively high 10-20% range.

And once again there's steel buyer confirmation. Specifically, four out of five report that foreign prices are under comparable domestic levels—though only a surprising 3% characterize the price break as being really substantial.

Monthly procurement status report

Leadtime index

A 'diffusion' index based on 158 key commodities. Above '50' indicates a tendency for leadtimes to stretch out. Below '50' suggests improving vendor performance.



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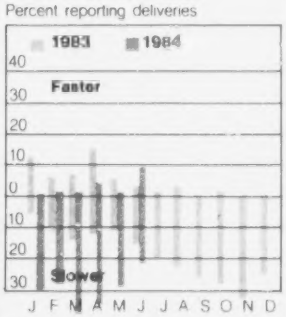
83 84

Delivery performance

Percent reporting deliveries



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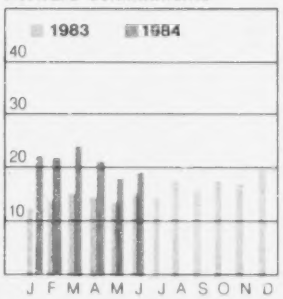
Forward commitments



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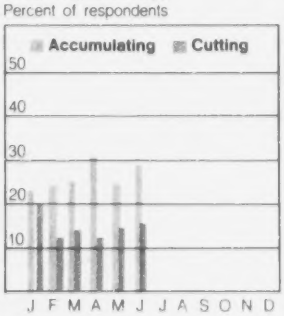
Inventory strategy

Percent of respondents



J F M A M J J A S O N D

Source: NAPM

PROCUREMENT STATUS

Summer brings things on time

The traditional summer slowdown is having its normal impact on leadtimes—with *PurchasingWorld's* exclusive index back down to the neutral 50 level. It marks the first time in more than a year that this yardstick of average delivery waits hasn't moved up.

As noted in the previous steel story, there's considerably less concern about steel now. And the same seems to be shaping up in the heretofore hard-to-locate semi-conductor sector—as producers gradually add to capacity.

One large electronic parts supplier, for example, now quotes 26 weeks for these important computer chips—down significantly from the 26-45 week range of a few months ago. And electronic component buyers generally—noting a trend back to on-time performance.

On-time performance seems to be improving in other sectors as well. Specifically, the 10% of NAPM Business Survey Committee members reporting faster deliveries this past month was the highest in a year and a half. Note too, that the number of PM's saddled with slower deliveries has been dropping steadily—from 35% in April to 28% in May and to 21% in June.

Also indicative of a less strained situation is the leveling off in vendor operating rates. As reported in this issue, the average factory utilization rate may may not even reach the 85% mark this year—a level most analysts now use as the cut-off point between a buyers' and a sellers' market.

The situation is best summed up by one Midwestern purchasing executive: "Things have pretty much stabilized as far as overall procurement and delivery performance is concerned. And if we can believe current forecasts calling for a general deceleration in the rate of business growth, I look for a relatively problem free period through fall and probably into early winter as well."

Leadtimes and availability

Chicago: Moving in a bit (with new weekly leads in parentheses) are paper (3-6), surfactants (1), c-r steel sheets (5), h-r steel sheets (3-4), steel plates (2-3), brass rods (4), and sanded plywood (1-2). But stretching somewhat are white coated/galvanized sheet (12) and copper rods (8-12). No change in most aluminum products.

Cleveland: Pretty much the status quo here—except for maintenance paints which have stretched a bit to 3-4 weeks. Other typical unchanged leads: corrugated (3), folding boxes (4), wirebound boxes (8), 2-ply fiber drums (2), polyethylene and PVC resins (3-4), cold finish aluminum (14), ferroalloys (on demand), and lumber (3).

Los Angeles: Coming into these new weekly rates are galvanized steel (12-16), grey iron castings (4-6), electromechanical devices (6-8), specialty wire (4-6), paints (3-5), stainless (14-16), custom storage tanks (6-8), and semiconductors (16-26). But out are heavy duty electric equipment (26) and computer peripherals (8).

BUSINESS DATATRAK

Houston: MRO items have turned a bit easier—with delivery now in only 2-3 weeks. Most other lines show little meaningful change, with these weekly waits noted: forgings (5-7), mill steel (4), service center steel (1), electric and electronic components (8), pumps (0-6), boilers and furnaces (31-42), and turbogenerators (26-65).

Philadelphia: Some small stretchouts in janitorial supplies (to as much as 2 weeks). And in stainless round coil from mills (12-14). But equally modest offsetting declines have hit aluminum bar, sheet and extrusions (now only 4-6), and plastic sheet—with polyethylene, polypropylene, and polystyrene types now only running at around 3-4 weeks.

Pittsburgh: Nothing much in the way of change here—with this assortment of leadtimes (in weeks) noted: coil coating paint (4), polyethylene (5), PVC (6), fabricated copper products from mill (6), steel strapping (2-3), all types of drums (1), multiwall bags (6), lumber (3-4),corrugated and folding boxes (3-4), and wirebound boxes (4-5).

Leadtimes (in weeks)

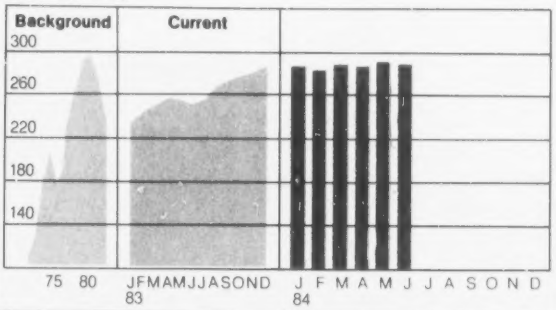
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	9	9	9
C-R Sheet (Chgo)	5	8	8½
Plate (Phil)	10	10	10
Plate (Chgo)	2½	3½	4
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	7	7	4½
H-R Bars (Chgo)	3	3	3½
Cold-Drawn Bars (Phil)	7	7	4½
Galvanized (LA)	14	16	11
Galvanized (Chgo)	6	8	7
Structurals (Chgo)	3½	3½	2½
Structurals (Hous)	17	17	15
Tubing (Phil)	7	7	7
Grey Iron Castings (LA)	5	9	6
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	5
Pipe, Carbon (Hous)	13	13	13
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	17	17	14
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	13	7
ICs (Linear) (Phil)	20	20	20
Motors (Phil)	15	15	21
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	20	20	10½
Relays (Chgo)	15	15	15
Resistors (Chgo)	14	14	10
Resistors, Wirebound (Phil)	10	10	9
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	3½	3½	3½
Plywood (Chgo)	2	1½	2
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	3	3	3
Softwood (Phil)	1/5	1/5	1/5
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Napthalene (Chgo)	2	2	2
Paint (LA)	5	5	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	3½	3	2½
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	3	3	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	3	3	2½
PVC Resin (Pgh)	6	6	4
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	3	3	3
Cartons, Corrugated (Hous)	3	3	3
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	4	4	4
Shrink Film (Clev)	3	3	3
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	2½	2½	2½
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	13	13	11
Aluminum Plate (Chgo)	14	14	9
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	13	13	14
Brass Castings (LA)	7	7	7
Brass Rods (Chgo)	4	4	3½
Brass Sheet (Chgo)	17	17	9
Brass Tube (Chgo)	9	9	9
Copper Fittings (LA)	3½	3½	5½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	5½	5½	5½
Copper Tube (Phil)	6	6	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	4	4	6
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	3	3	3
Wire, Specialty (LA)	5	8	5
Zinc (Pgh)	6	6	6
MISCELLANEOUS			
Bearings, Domestic (Phil)	22	22	12
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	48	48	52
Compressors, Reciproc. (Hous)	39	39	43
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	7	7	4
Fasteners, Std. (Phil)	2½	2½	2
Heat Exchangers, Carbon-alloy Steel (Hous)	20	20	20
Heat Exchangers, Hi-pressure (Hous)	43	43	21
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	2	2	2
Pumps (Hous)	35	35	39
Pumps (LA)	9	9	9
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	17	17	6½
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month	286.5
Month before	289.5
Year ago	250.5

Index: 1967 = 100



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	347.00	347.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	24.40	24.40	24.40
Steel, bars, dlvd. Phila., cwt., merchant quality	17.50	17.50	17.50
Steel, bars, Pitts., cwt.	17.50	17.50	17.50
Steel, bars, C.R., Pitts., cwt.	26.00	26.00	26.00
Steel, plates, Pitts., cwt.	23.25	23.25	25.75
Steel, plates, H.R., Pitts., cwt.	23.25	23.25	25.75
Steel, sheets, C.R., Detroit, cwt.	27.10	27.10	26.15
Steel, strip, C.R., Chi., cwt.	35.30	35.30	29.05
Steel, basic wire, Pitts., cwt	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.578	0.655	0.705
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	5.20	5.20	4.95
Brass, red, 85%, [sheet], lb.	1.25	1.28	1.28
Brass, yellow, [sheet], lb.	1.23	1.23	1.23
Cadmium, ton lots, lb.	2.25	2.25	1.15
Copper, electrolytic, wire bars, refd., lb.	0.65	0.69	0.78
Copper sheet, over 24 in., lb.	1.34	1.37	1.38
Lead, common, N.Y., lb.	0.300	0.280	0.200
Magnesium, pig ingot, [99.8%], lb.	1.48	1.48	1.38
Mercury, 20 fl. lots, N.Y., fl.	318.00	324.00	280.00
Molybdenum Climax Oxide/bags, lb.	4.65	4.65	4.65
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	7.59	8.67	11.51
Tin, Straights, N.Y., lb.	6.29	6.39	6.71
Zinc, Prime West, East St. Louis, lb.	0.50	0.53	0.40
Zinc, die casting alloy, No. 3, lb.	0.565	0.595	0.465
PAPER			
Uncoated book #3 offset, ton	850.00	810.00	680.00
Watermarked bond, ton	985.00	985.00	845.00
Gummed sealing tape, carton	15.85	15.45	15.42
Boxboard, mach. clay ctd. recycled sheets 80 bright, .016, ton	495.00	475.00	475.00
Wrapping paper, std. distributor cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	320.00	320.00	270.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.329	0.297	0.236
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.04	1.04	0.99
Cotton middling, 1", N.Y., lb.	0.715	0.782	0.714
Printcloth, 48", 80x80, N.Y., spot, yd.	0.76	0.76	0.60
Army duck, 37", 13 oz., yd.	1.91	1.90	1.63
Blended printcloth, 64", 78x54, yd.	0.760	0.760	0.695
20s combed yarns	2.16	2.16	1.72
Wool tops, N.Y., lb.	3.60	3.60	3.60

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	0.455	0.455	0.430
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	210.00	210.00	150.00
Benzene, petroleum, tanks, Houston, gal.	1.41	1.41	1.50
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.58	0.58	0.66
Formaldehyde, USP, 37% [12% to 15% meth.], tanks, lb.	0.106	0.106	0.106
Glycerine, synthetic, tanks, lb.	0.81	0.81	0.73
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.54	0.45	0.48
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.305	0.305	0.275
Polyethylene resin, low density liner film grade (market price), lb.	0.400	0.415	0.380
Polypropylene, homopolymer grade (market price), lb.	0.415	0.415	0.360
Polystyrene, general purpose grade (market price) lb.	0.41	0.42	0.37
Shellac, bone dry, N.Y., lb.	1.65	1.65	1.65
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.35	0.35	0.31
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	140.00	140.00	132.50
Sulphuric acid, 66%, commercial, tanks, ton	56.85	56.35	56.35
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.33	1.33	1.33
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	316.20	316.25	348.50
Lumber, 2x2, pine, mbf, cl	311.15	312.40	341.60
Plywood, plyform, ¾", msf, cl	568.00	569.65	558.10
Plywood, ⅜", msf, cl	363.55	367.20	363.05
Cement, bulk, ton, tl	61.37	61.37	61.89
Sand, ton, cl	6.05	6.05	5.95
Ready-mix concrete, 3,000 psi/cu.yd., 15 cu. yd.	45.50	45.50	45.57
Crushed stone, 1½", ton, cl	7.68	7.68	7.89
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.77	0.77	0.75
Gypsum sheathing, ½"x1"x8", msf, tl	203.15	203.15	168.93
Brick, common, per thousand, tl	176.13	176.03	172.30
Asphalt paving, AC-20	165.60	165.60	155.88
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.97	6.97	6.63
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	26.15	27.50	24.75
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	31.50	31.75	31.00
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.700	0.770	0.890
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.766	0.790	0.888
Heating oil, No. 2, Chi., bulk, gal.	0.808	0.853	0.810
Heating oil, No. 2, N.Y., bulk, gal.	0.798	0.818	0.853
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	25.98
Jet kerosene, gal.	0.760	0.775	0.795
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.410	0.410	0.490
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	86.00	95.00	74.00
Steel, No. 1, hvy., dlvd., Chi., ton	78.00	84.00	68.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	0.550	0.585	0.680
Copper, No. 2, East, wholesale buy,	0.460	0.495	0.605
Brass, red, East, wholesale buy, dlvd., lb.	0.510	0.545	0.640
Brass, yellow, East, wholesale buy, dlvd., lb.	0.380	0.380	0.350
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	0.395	0.425	0.385
Alum., mixed clip., E., wholesale buy, dlvd., lb.	0.420	0.450	0.415
Zinc, old, East, wholesale buy, dlvd., lb.	0.230	0.230	0.090
Lead, clean solids, East, wholesale buy, dlvd., lb.	0.180	0.145	0.110
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	35.00	35.00	25.00
Paper, old corrug. box, dlr., N.Y., ton	32.00	32.00	20.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.140	0.130	0.90
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.34	0.34	0.35

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Chemicals buoyant, prices less so

Chemical markets are becoming a bit more buoyant these days, but price increases for the most part should remain quite modest. Indeed, lingering overcapacity and continued foreign competition should combine to keep increases somewhat under the general inflation rate—not only for the current year but for 1985 as well.

That, in a nutshell, is how analysts at Wharton Econometrics see developments in the big sprawling $190 billion-plus chemical industry. In a new study prepared exclusively for ***PurchasingWorld***, Wharton analysts say that the industrial output of chemical and allied products viewed as a whole should advance 7.8% this year—a rate of growth that is faster than that of the general economy. Even larger gains are projected in the paint and synthetics sectors where increases could run 19% and 13%, respectively.

All of this, of course, will continue to push up operating rates which are currently estimated to be somewhere near the 80% mark. But even next year, there should be more than enough to go around—as production gains are partially offset by continuing capacity increases in many key areas.

Coming back to prices, industrial chemicals as a group are expected to sport only a small 1.1% average advance this year. And even if you add in some of the industry's more bullish product lines such as drugs and plastics, little more than a 3.6% overall increase over 1983 is anticipated.

Going further out—1985 doesn't look all that bad for the typical chemical buyer either. Right now, the average price increase for that year looks to be just in excess of 5%—again somewhat under the nation's overall inflation rate.

Rising productivity could also be a factor contributing to these small price increases. At latest report, for example, industry efficiency was running a hefty 7% above a year earlier—with further gains expected (reflecting this year's big 16% increase in new capital spending).

But if any one factor could be singled out as a price restraining force it would have to be import competition. The strong U.S. dollar has played a key role here. But there are other factors at work too:

- Domestic producers have found it more profitable to buy basic petrochemicals abroad and then resell them in the United States.
- Latin American countries, plagued by debt, are unable to buy large amounts of chemicals from the U.S. Our exports to these nations have dropped 20% since 1981.
- Oil-rich nations are rapidly becoming better able to produce petrochemicals at a lower cost than most U.S. producers.

One has only to look at some basic petrochemical imports to see the extent of this problem. Over the first four months of this year, big increases in overseas production have been reported for such product lines as methanol, benzene, cyclohexane, and cumene.

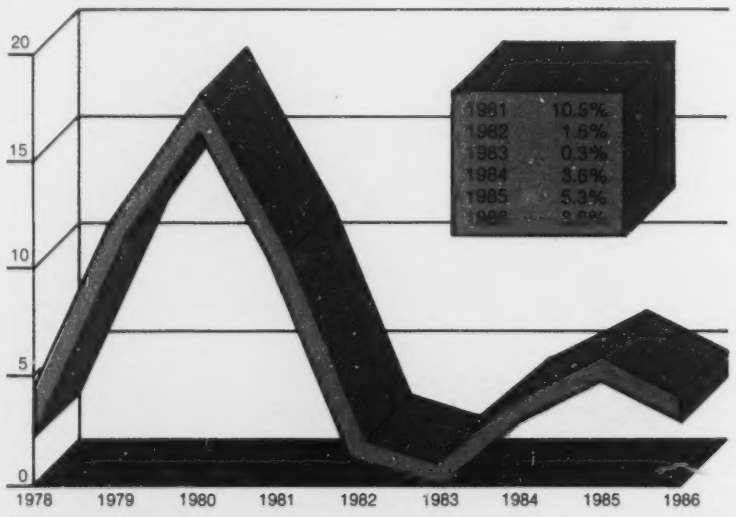
The situation is perhaps best summed up by a recent Commerce Department forecast where imports for 1984 as a whole are expected to jump 30% this year (to $12 billion) while exports will inch up only 9% (to $21.5 billion). Result: The chemical net trade surplus will come to only $9.5 billion this year—8% under 1983 and a whopping 32% under the $14 billion net balance of 1980.

Despite all of the above, the industry remains in very good shape—at least as far as overall earnings are concerned. In early 1984, for example, chemical company profits were running 60% ahead of year-earlier levels.

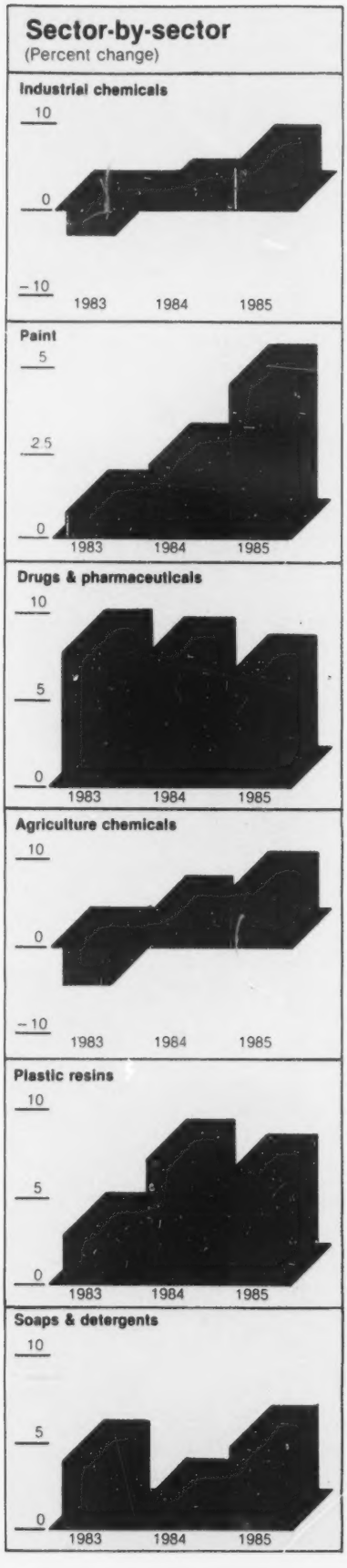
But as might be expected not all segments of the industry are faring equally as well. Here is a more detailed rundown of how some of the major sectors of this big, diverse industry are likely to fare over the next year or two:

Industrial chemicals: Production will outpace the chemical and allied product industry average—rising 10.6% this year. But as the economy begins to slow down in 1985, these demand-sensitive materials are expected to show only a small 2.3% increase. The latter, however, won't prevent some modest price acceleration in this sector—1.1% this year and 5% in 1985 (vs. a 2.8% decline

The overall trend
(% increase over previous year)



Source: Wharton Econometrics



in 1983). But by 1986, price increases should start decelerating, if what Wharton terms a "growth pause" materializes.

Paints and pigments: Last year's 2.6% increase in output reversed three consecutive years of decline. But because of over-capacity and competitive pressures, prices advanced only 0.7%. This year, however, there should be considerable acceleration on the price front—as continued recovery in the big housing and automotive markets permits quotes to rise 1.6% this year and an even more robust 4.6% in 1985. Demand, however, should begin to decelerate after this year's forecast 19.2% increase. Indeed, as orders from the auto and housing sectors slow down, only about a 3% production increase is seen for 1985.

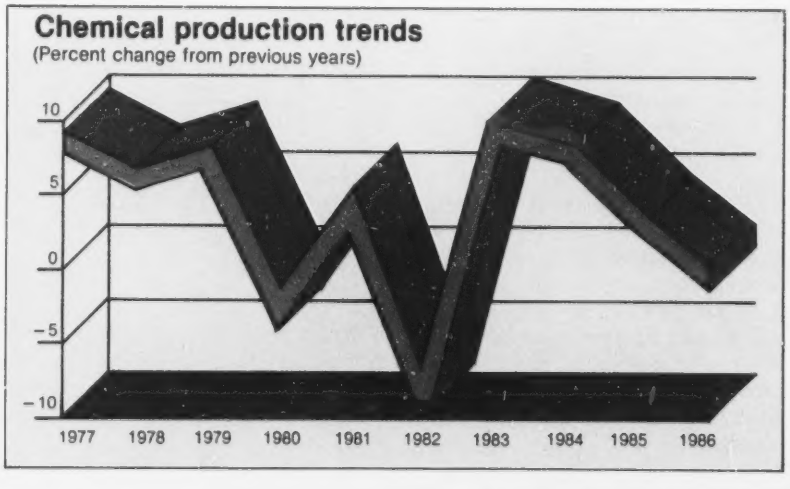
Drugs and pharmaceuticals: Growth in this area is basically anticyclical. As such, production gains will be only slightly above the 5% increase noted last year—about 5.3% in 1984 and 5.6% over the next 12-month period. Given this relative stability, it is not surprising that there is less price variation noted here than in other segments of the industry. All in all, look for price increases of 7.7% and 6.4% for 1984 and 1985, respectively. These figures are not that much different from the 7.8% advance racked up over the last year.

Agricultural chemicals: A reduction in active farm acreage (due to PIK) has depressed farm prices and income—thus helping to drop agrichemical quotes 4.1% last year. But the stage is set for a strong recovery this year. PIK is being cut back, farm income has increased markedly, surplus grain stocks have been cut sharply, and agrichemical prices are now low relative to grain quotes. These conditions suggest a 3.7% price increase this year—with an even bigger 5.6% advance likely for 1985. All of this will be accompanied by about a 6% increase in agrichemical production this year—a sharp reversal from last year's 5.4% decline.

Synthetic materials: Buoyancy is now the order of the day here—reflecting today's solid economic recovery and the increasing penetration of plastics into the auto, packaging, and other markets. This trend is being spurred along by double-digit increases in R&D and capital outlays this year. In any event, the 13% increase in overall synthetic material output expected for 1984 should, if nothing else, permit a good sized 6.8% price increase—with an almost as large 6.2% advance forecast for 1985. But the rate of increase should begin to tail off by the third or fourth quarter of that year as demand gains begin to slow down significantly.

Soaps and detergents: This is another basically non-cyclical sector, with growth (as measured by industrial production) expected to average out at 1.9% this year and 2.6% in 1985. Similarly, no major shifts in price patterns are foreseen. Increases of 2% and 4.4% are anticipated for 1984 and 1985, respectively—pretty much in line with last year's estimated 3.9% price advance.

PW



Chemical outlook is bright for buyers

By Thomas F. Dillon, Senior editor

Buyers of major industrial chemicals have little to worry about in terms of supply...prices have been held down by excess capacity and worldwide competition...Chemical manufacturers would like to raise prices but can't.

Buyers of chemicals have reason to be content. Supplies exceed demand. Prices are firm and are likely to increase only slightly in the months ahead. And even more supplies are being made available overseas.

Here's what chemical industry analysts, marketing execs and product managers throughout the country are saying about the industry:

- Demand has improved over a year ago.
- Operating capacity, at 72%, is still behind the industry's historic level.
- Prices, while moving up a bit, are still well below pre-recession levels.

Because almost 70% of the industry's production goes to intermediate users (rather than end users), the industry must sell its products in many markets. Consequently the industry's health depends upon the performance of the general economy rather than on the health of a few individual segments.

Chemical manufacturers tell ***PurchasingWorld*** that they are anxious to raise prices, but that the threat of import competition and the slack that has not yet been taken up by the improving economy are working to keep the lid on prices.

Here's what to expect in key industry chemical markets for the foreseeable future:

Ammonia. U.S. demand for ammonia will increase from an estimated 18.9 million tons in 1984 to 19.8 million tons by 1986, according to Probe Economics Inc., the Mt. Kisco, NY-based chemical industry consultants. At the same time, the firm estimates that U.S. capacity will be decreasing from an estimated 20.1 million tons to 19.5 million tons. Still, many in the industry are predicting an oversupply in the years ahead.

Ammonia is an attractive export for the gas-rich countries of the Middle East because it is easier to ship and handle than highly volatile gas which must be pressurized and refrigerated. Ammonia production is thus one of the favorite methods of converting excess gas into a marketable and shippable product. Russia, which controls about 44% of the world's gas reserves, is also a potential supplier of ammonia. For these reasons, U.S. production of ammonia is expected to decline, but any slack will more than be made up for by imports.

Benzene. U.S. demand for benzene is running around 1.6 billion gallons annually. It is a co-product in the production of ethylene produced from heavy crude oil feedstocks such as naptha. About 50%

Photo courtesy Diamond Shamrock

of benzene produced is used to make ethylbenzene.

Both production and consumption of benzene have increased substantially this year and stocks of benzene have fallen steadily.

Carbon Dioxide. Carbon dioxide is an example of how the supply of one chemical depends on the demand for another. Carbon dioxide manufacturers can sell as much of the product as they can get their hands on. The problem, when there is one, is the availability of adequate supply. Because carbon dioxide is a byproduct, supply depends on the production of other chemicals.

In the past two years the supply of carbon dioxide was tight because the ammonia industry, one of its sources, was depressed. Ammonia is used to make fertilizer, and the demand for fertilizer was down because of the government's payment-in-kind (PIK) crop program, which was designed to discourage planting. That situation has changed, and demand for ammonia and the supply of carbon dioxide are increasing.

Carbon dioxide is primarily used as an expandable refrigerant (dry ice) for freezing and chilling. It is also used in carbonated beverage production. A more recent use is for fumigation of grain in silos.

Carbon dioxide supply is expected to meet current demand and prices should remain firm.

Chlorine. Chlorine producers have been operating at 77.5% of capacity in recent months, significantly higher than last year. The increased demand has caused recent price hikes announced by major producers.

The largest single consumption of chlorine is in the manufacture of polyvinyl chloride (PVC) which accounts for 22% of the total output. Chlorine is also used in water treatment, paper and pulp production, and in manufacturing organic and inorganic chemicals.

As Middle East sources develop facilities to produce PVC, more will be imported to the U.S. and there will be less demand for domestically produced chlorine in this market.

Ethylene. This "primary" petrochemical is used to produce several "intermediate" petrochemicals (e.g. ethylene oxide, ethylene glycol, and ethylene dichloride) which, in turn, are used to manufacture petrochemical "products" and petrochemical dependent products. U.S. demand for ethylene has been running in the 32 billion pound range in the past few years and should continue at that level through 1985.

In recent months there have been downward revisions of projected world demand because of slower growth rates in developing countries and a general slowdown in the world economy. Ethylene can be produced from heavy crude oil feedstocks such as naptha. When heavy feedstocks are used, co-products such as propylene and benzene are also produced. Ethylene can also be produced from light feedstocks, such as natural gas and natural gas liquids. Gas-rich countries in the Middle East, Canada, Mexico, Indonesia, and the Soviet Union are adding petrochemical production facilities and some are expected to compete for U.S. and other world markets.

Ethylene oxide. Ethylene oxide has three major markets. About 40% goes into ethylene glycol antifreeze, 40% into the production of

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polyester fiber, and 20% into industrial and other uses.

New ethylene glycol production facilities were announced recently by Union Carbide Corp., Danbury, CT, and PPG Industries, Pittsburgh, PA. Union Carbide started operations in a $300 million manufacturing facility in Alberta, Canada. PPG increased its ethylene glycol output by 50% when its facilities in Beaumont, TX started operating.

Probe Economics Inc. estimates that demand for ethylene oxide will be 5.9 trillion lb in 1984, 6.1 trillion lb in 1985, and 6.2 trillion lb in 1986. U.S. capacity for those years, says Probe Economics, will be about 6.9 trillion lb.

Lime. Some 89% of lime sales are for chemical and industrial use. Construction accounts for 8% and refractories account for 3%. Agricultural use is negligible.

Lime shipments in 1983 represented 60% of capacity. Prices have been increasing with an average price per ton of $41.18 in 1979, $46.89 in 1981, and $50.50 in 1983.

Demand is expected to increase at about 3% annually through 1990, according to the U.S. Bureau of Mines. Environmental regulations are increasing the demand for lime for use in desulphurizing stack gases at thermal power plants, smelters, refineries, and chemical plants and for neutralizing industrial effluent water and solid wastes.

Methanol. Worldwide overcapacity, prospects of additional supply from the Middle East, and depressed markets have cast a shadow on the previously bright outlook for methanol. During the gasoline shortage, methanol was heralded as a replacement fuel. Production was sharply increased, but the replacement fuel market developed sufficiently and dried up when gasoline became more plentiful.

Methanol is used to produce formaldehyde, and this market, too, is plagued with overcapacity. Two major markets for formaldehyde are automobiles and housing. Climbing interest rates are already curbing demand for housing and are soon expected to slow down the automotive market. Methanol's use in converting natural gas into an easily transportable product is seen as one possible growth area.

Probe Economics estimates that net methanol imports will increase from 110 million gallons in 1984 to 300 million gallons in 1986 because of additional methanol capacity coming on stream in other parts of the world.

Nitric acid. Nitric acid is made from ammonia so its price is directly related to the price of ammonia. Its major use is in the production of ammonium nitrate fertilizer.

Demand for fertilizer dropped last year as a direct result of the government's PIK program to reduce surplus farm products.

Nitrogen and oxygen. Nitrogen and oxygen are co-produced in atmospheric gas plants at a ratio of four parts nitrogen to one part oxygen. Since the raw material is unlimited, supply is limited only by production capacity. The cost of power to make the gas and the cost of transporting it are the major considerations in determining price and market area.

In the past, oxygen has been in greater demand because of its extensive, cost efficient use in steel production (BOF furnaces), and in other metalworking operations.

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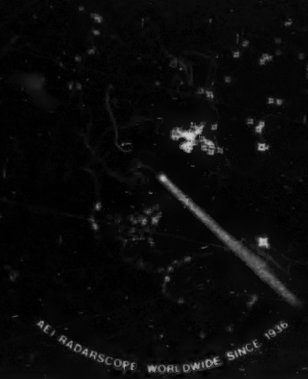

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Chemical outlook

mand. It is used in the electronics industry where it provides an inert atmosphere, in chemical applications, and in fertilizer production for agriculture.

Demand for oxygen is concentrated in heavy industries. Therefore, its demand tends to be cyclical, along with those industries. Nitrogen demand has been fairly constant throughout economic cycles.

Phosphoric acid. The U.S. is the only country that is basic in both phosphate rock and sulphur, both used to make phosphoric acid. The U.S. is also politically stable. For these reasons, the U.S. is a major exporter of phosphoric acid.

Supply is ample and demand is estimated at 9.4 million tons for 1984, 10 million tons in 1985 and 10.6 million tons in 1986. Capacity is projected at 11.5 million tons for 1984 and 1985 and 12 million tons for 1986.

Propylene. When ethylene is produced from heavy crude oil feedstocks such as naptha, propylene is one of the co-products. But because more ethylene is being produced from non-propylene producing lighter feedstocks, there has been a reduction in the available supply of propylene. If the above trend continues, some tightness in the supply can be expected.

Annual demand has been in balance with supply at 15 million lbs.

Sodium carbonate (soda ash). About 50% of soda ash production in the U.S. is used in the manufacture of glass. Two thirds of glass production is glass containers, and this market is being severely eroded by plastics. Some industry observers, such as Roger E. Shamel, president, Consulting Resources Corp., believe the industry's outlook is uncertain.

Soda ash is also used in chemical processes, soaps and detergents, water treatment, and pulp and paper manufacturing.

The U.S. is heavily endowed with natural soda ash. Domestic capacity far exceeds demand, and there is so much left over that U.S. producers must export it, particularly to Europe and Japan.

Sodium Hydroxide. Probe Economics Inc. predicts demand for sodium hydroxide in 1984 will be 10.2 million tons and that this demand will increase to 11.4 million tons in 1986. U.S. capacity should remain steady at 15.3 million tons.

A key element in the cost of sodium hydroxide production is the cost of power. As natural gas prices increase, suppliers who are heavily dependent on natural gas as a power source (those in the Gulf Coast states, for example), will be forced to increase their prices. Probe Economics projects a price of $109 per ton in 1984, increasing to $131 in 1985, and to $143 in 1986.

One expected result will be competition in the U.S. market from more imports from Canada. Canadian producers are in a strong competitive position because of their abundant low cost hydroelectric power supply.

The major use for caustic soda is in the manufacture of organic chemicals. This market is expected to increase 2-3% annually.

Styrene. Styrene is made from ethylene and benzene. Probe Economics estimates U.S. demand at 7.1 trillion lb in 1984, 7.2 trillion lb

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in 1985, and 7.3 trillion lb in 1986. U.S. capacity is put at 9.2 trillion lb in 1984 and at 9.4 trillion in both 1985 and 1986.

The U.S. is a net exporter of styrene, but exports are expected to fall from 1.8 trillion lb in 1984 to 0.6 trillion lb in 1985 and still lower in 1986. This projected drop is due to significant growth in overseas production capacity, particularly in the Middle East where there is an abundance of low-cost petroleum feedstocks.

Sulfuric acid. Demand for sulfuric acid has been increasing steadily in recent years and is expected to reach 38.5 million tons in 1984. Though up from 1982's 35.0 million ton level, this is still well below U.S. capacity, now estimated at 60.8 million tons.

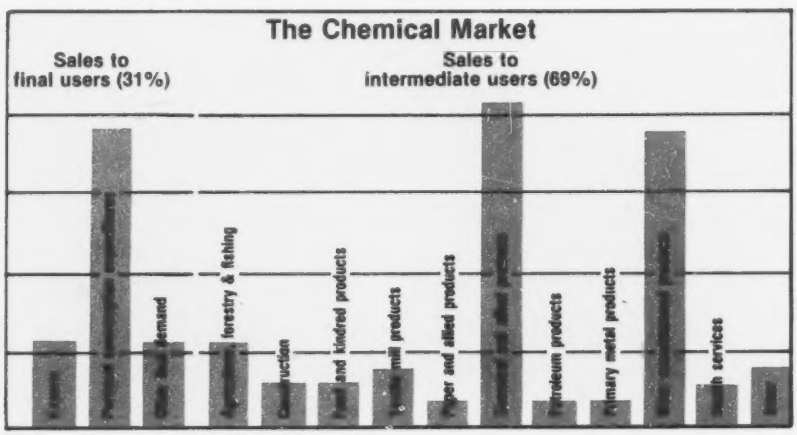
The price (f.o.b. Gulf Coast) has been declining since 1982, and in 1983 the price was $60.37 per ton. The price is expected to settle at $55.00 per ton in 1984 and then move up to $76.40 in 1986.

Price competition is being generated by I.E. DuPont de Nemours & Co., and Canadian Industries Ltd., a division of Imperial Chemicals Industries. CIL has been cutting into the U.S. market and recently purchased the National Industries sulphuric acid plant in New Jersey.

Probe Economics predicts that the demand level will reach 42.2 million tons in 1986, with supply posted at 61.2 million short tons.

Toluene. Toluene is used primarily as a gas blend to increase octane ratings. Therefore the demand for gasoline determines the demand for toluene. With increased emphasis on the removal of lead from all gasoline, the demand for toluene, weak now, is expected to grow.

Vinyl chloride monomer. VCM is used to make polyvinyl chloride plastic. Although present capacity greatly exceeds demand, Probe Economics is optimistic about the product's future and sees a fairly strong 4-4.5% growth in demand annually through 1985. Increased inroads by plastics into other markets, such as the replacement of metals in automotive applications, is one of the reasons for this optimism. ***PW***



Source: U.S. Department of Commerce

PW survey: transportation

It still looks like clear sailing as far as freight tabs are concerned —despite more than 18 months of solid business recovery. So say the overwhelming number of purchasing managers responding to a new nationwide ***PurchasingWorld*** transportation survey.

To be sure, the next 12 months won't be quite as easy as the last 12, but, by and large, few see any major rate acceleration. Indeed, the overall freight boost could well continue to lag behind the inflation rate.

Factors cited for this basically hold-the-line trend: lingering overcapacity, intramodal and intermodal competitive in-fighting, relatively stable fuel costs, increased carrier productivity, and the still-substantial impact of recent deregulation moves.

In the words of one shipper whose annual shipping bill tops the $1 million mark, "We still have plenty of bargaining leverage. And if the economy slows down as expected, I think that we can continue to negotiate good deals through the rest of the year and into early 1985."

■ **The recent past:** Over the last 12 months, a surprising 20% of respondents said they were actually able to lower their overall freight bills—with another 30% suggesting little or no change in their average quotes. In short, one out of every two surveyed was able to avoid an increase over the last year.

True, this is somewhat under the 69% reading recorded six months ago when a similar survey question was asked (***PW***, 2/84, p. 68). But it's still impressive given the big increase in tonnage being shipped today.

■ **Expected increases:** The average overall freight rate boost for all modes over the next 12 months is put in the 4-6% range—pretty much what PMs were saying about the subsequent four quarters back in early 1984 when a similar question was asked. And while no one now expects a decline, a surprising 10% still feel they can keep tags relatively unchanged through the middle of next year.

That's not to say, of course, that everything is coming up roses. Thus three out of five respondents are reconciled to some acceleration vis-a-vis their experience over the last 12 months. But the acceleration is generally modest, with not one single purchasing executive anticipating any return to the double-digit rates of a few years back.

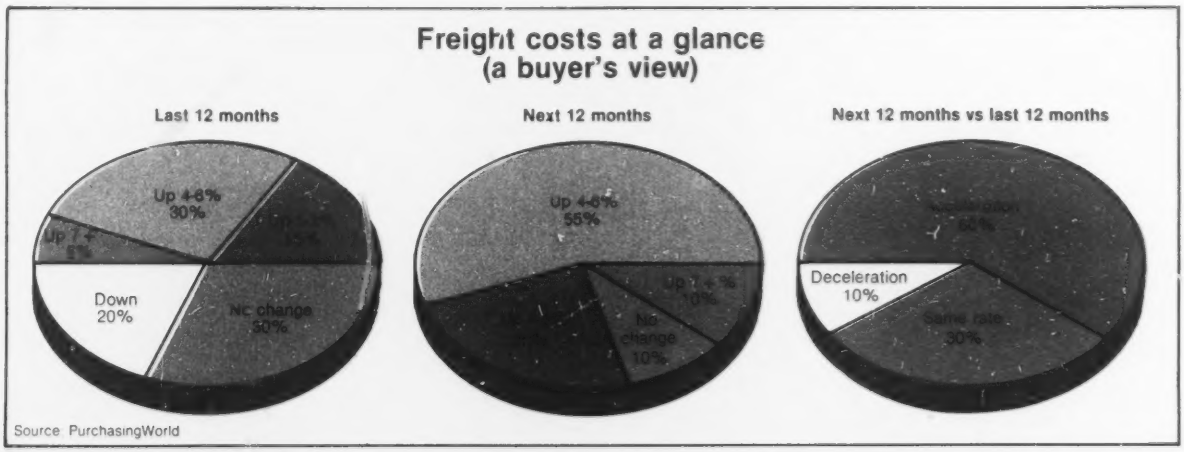
Moreover, not all that much difference is noted between either carload and LCL, or truckload and LTL rate increases. On the other hand, the expected overall rail increase (averaging 4-5%) runs a bit under the 5-6% estimate for the trucking sector. Transportation buyers also hope to hold most air cargo increases to 5% or less.

Equally encouraging are some of the savings being effected by innovative approaches. Well over one-third of the respondents, for example, have moved into contractual agreements—with the savings in a few cases running close to 50%. And these contracts cut across modal lines—with good savings noted in the trucking, railroad, and barge sectors.

There have also been more intermodal shifts—with all sorts of combinations noted. One small shipper, for instance, reports that a shift from air to expedited ground transportation helped knock $50,000 off his freight bill over the last year. And another says a change from trucks to a trailer on flat car (TOFC) approach has alone managed to knock 5% off his overall freight tab.

In some cases, non-cost considerations are behind such changes. One respondent observes that emphasis on just-in-time inventorying has necessitated moves out of rail into trucks to ensure better delivery.

Other cost-cutting strategies that seem to be paying off: (1) reduction in the number of carriers that a shipper does business with to increase bargaining leverage, (2) insistence that the buyer rather than the vendor make the carrier selection, (3) search for back-haul possibilities to cut down on overall costs, (4) increase in shipment size, and (5) development of national volume agreements. ***PW***



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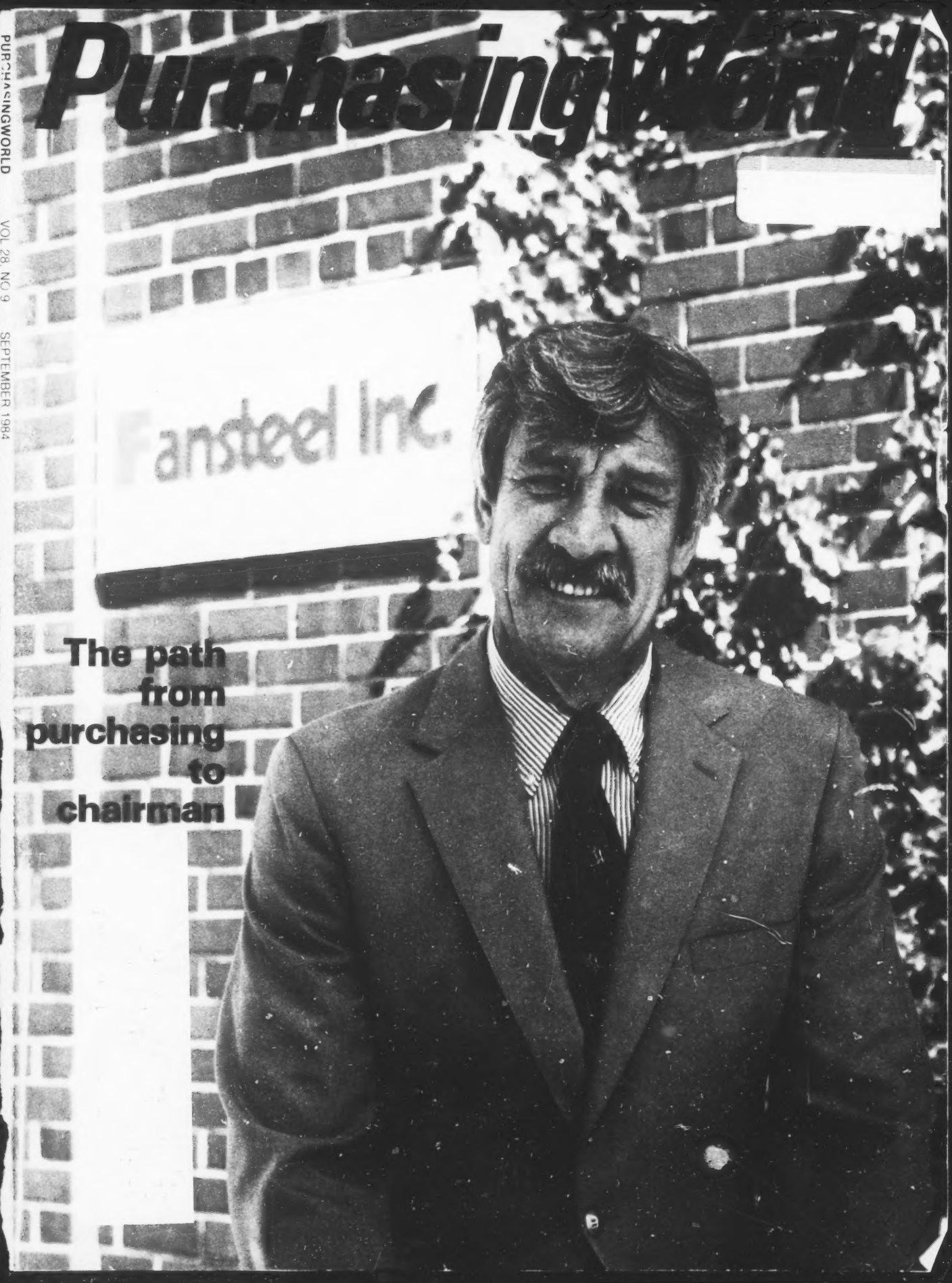

The path from purchasing to chairman